## **Forward**

In February 1993, federal standards for the use or disposal of biosolids (40 CFR Part 503) were enacted (Federal Register, 1993). The Part 503 rule addresses land application and beneficial use of biosolids. Included in the rule was a two-year time limit on storage of biosolids for beneficial use. The Part 503 rule did not specifically address management standards and practices for storage of biosolids.

Since the enactment of Part 503, numerous stakeholders, land appliers and biosolids operators have come to understand that there are critical issues associated with successful off-site storage of biosolids (off-site meaning not at the wastewater treatment facility). These issues have not been addressed by code or other guidance documents that are available for reference by biosolids generators and managers, regulatory agencies, or the public.

This guidance document was written to provide a set of consistent Recommended Management Practices for the field storage of biosolids. It identifies three critical control points for managing the system: the wastewater treatment facility, the transportation process, and the field storage site. It provides the elements needed for good site design and operation. This document also stresses the continuing need for partnership and good communication between the biosolids generators and managers responsible for storage and land application to ensure community-friendly operations. The guide targets management practices to address three critical issues: air quality (odors), water quality, and sanitation (pathogens), which have potential environmental, public health and community relations impacts. In the interest of developing a holistic approach to management of organic byproducts, in Chapter 7 there is a discussion of recommendations for storage of organic by-products other than biosolids.

The information in this document represents the collective efforts of a workgroup of professionals with expertise in the generation, processing, transport, field storage, land application, agricultural use, regulation, and public acceptability of biosolids. This group met in June 1997 at Beltsville, MD, to examine the issues and begin framing a set of recommendations for biosolids storage practices. The workgroup continued its effort over a three-year period and has solicited extensive review and comments from a variety of stakeholders and peers. This guide represents the ideas, experience, and knowledge of these scientists and practitioners relative to management of stored biosolids. The key principles for

successful biosolids storage as described here are common to numerous storage projects that have been operated successfully in the U.S. It is the desire of the workgroup and contributors to share information and field management techniques that lead to success, and conversely to failure, so that all biosolids managers and states can develop and operate high quality storage programs that support beneficial biosolids use projects